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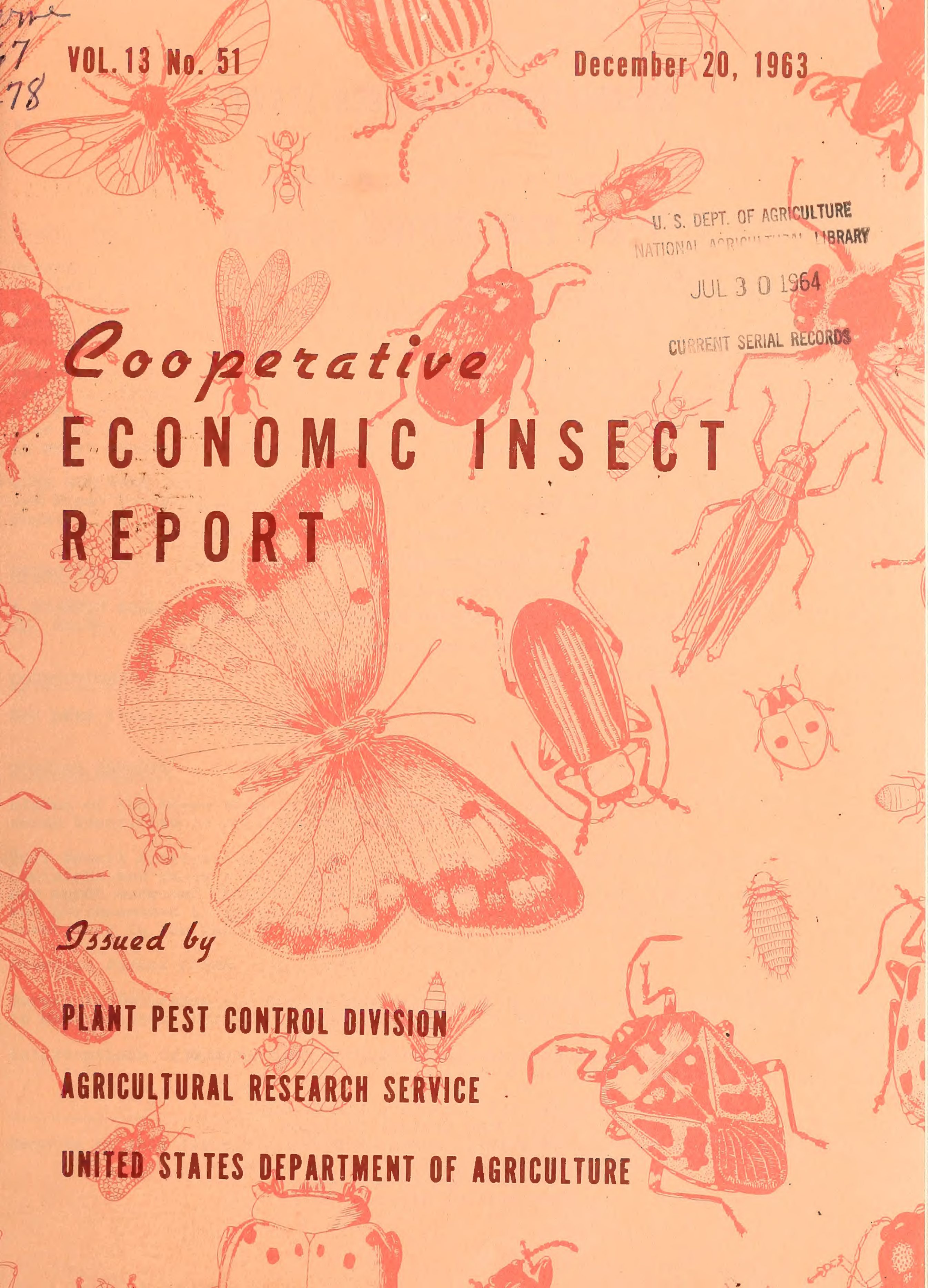

Cooperative
ECONOMIC INSECT REPORT

Issued by

PLANT PEST CONTROL DIVISION

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

SURVEY AND DETECTION OPERATIONS

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearing house and does not assume responsibility for accuracy of the material.

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Volume 13 December 20, 1963 Number 51

COOPERATIVE ECONOMIC INSECT REPORT

HIGHLIGHTS

GREENBUG counts 200 per linear foot in localized area of Payne County, Oklahoma, and heavy populations reported in isolated sandy land areas of Logan County, same State; 2 fields sprayed in latter area. Annual CHINCH BUG hibernation survey in Kansas revealed severe ratings in Montgomery County, southeast area, and Linn County, east central area. (p. 1405).

PEACH TREE BORER quite heavy and active on untreated peach, plum and cherry trees in Alabama. CITRUS RUST MITE and TEXAS CITRUS MITE populations higher on citrus leaves in Florida than any other November on record; cold-damaged groves have heavier infestations. HICKORY SHUCKWORM larval populations extremely high in pecan shucks in numerous Lee County, Alabama, orchards. (p. 1406).

PINK BOLLWORM infestations still being found in cotton-growing areas of Maricopa and Pinal Counties, Arizona; infestations found in nearly all areas of Maricopa County. (p. 1407).

DETECTION

A DIASPID SCALE INSECT (*Clavaspis herculeana*) found for first time in Hawaii. (p. 1416).

CORRECTIONS

See page 1411.

SPECIAL REPORTS

Status of the Screw-worm in the Southwest. (p. 1409). Only 14 cases of screw-worms identified in southwestern eradication area, all in Texas.

Boll Weevil Hibernation Surveys in North and South Carolina, Tennessee, Mississippi, Louisiana and Texas - Fall 1963. (pp. 1413-1415). Average counts (live weevils per acre) exceeded those of the fall of 1962 only in south central South Carolina and northeastern Louisiana. In all other areas sampled, average counts were lower than in the fall of 1962.

Hawaiian Insect Notes. (p. 1416).

Survey to Determine the Oviposition and Hatching Records of the Alfalfa Weevil in Massachusetts During the Fall of 1963. (p. 1417).

Interceptions of Special Interest at U.S. Ports of Entry. (p. 1418).

Reports in this issue are for week ending December 13, unless otherwise indicated.

WEATHER OF THE WEEK ENDING DECEMBER 16

At the beginning of the week, a vigorous storm centered over the Great Lakes region was causing strong, gusty winds and snow flurries from the upper Mississippi River Valley eastward to the Appalachians. Another storm brought rains from central California northward and rain or snow over the Pacific Northwest and Rocky Mountains. This storm intensified as it moved eastward. It produced heavy snow over the northern half of the Country from the Rocky Mountains eastward to the Atlantic. Temperatures over the Rocky Mountains dropped to zero as far south as northern New Mexico. Subzero temperatures occurred over the Great Plains as far south as Oklahoma. Freezing temperatures reached the Gulf of Mexico. Tallahassee, Florida, registered 23° Tuesday morning. The Weather Bureau issued heavy snow and glaze warnings to help protect stockmen and travelers.

By Saturday morning, the storm had moved eastward to the Atlantic and the leading edge of the Arctic air had pushed its way to the Gulf of Mexico. A new wave developed over the northern Great Plains and cold temperatures continued throughout the United States. Light precipitation continued over the northern part of the Nation from Washington to New England. As the storm moved eastward, high pressure dominated mid-America. Subzero temperatures pushed southward. Kirksville, Missouri, registered 10° below zero and Bemidji, Minnesota, registered 36° below zero Monday morning. At the end of the week, winter gripped the entire Nation. A new storm in the Far Northwest was bringing rain along the coast and snow at higher elevations. Scattered flurries occurred over the northern and central Great Plains, with heavier snow in the lee of the Great Lakes. In southern Florida, where afternoon temperatures had been in the 80's, the temperatures rose no higher than the 70's on Sunday.

Temperatures for the week averaged below normal over the entire country, except at Key West, Florida. Most of the northern and central Great Plains averaged colder than 15° below normal. Precipitation exceeded 1/2 inch over New England and 1 inch over the extreme Northwest. Over the southeastern quarter of the Nation, precipitation ranged from 1 to 4 inches. Several stations received slightly more than 4 inches during the week. Other areas of the United States received little or no precipitation. Snow fell as far south as the northern portions of the Gulf States and freezing rain fell in the central parts of those States. At the end of the week, the northern half of the country was covered by snow which ranged from 2 to 10 inches deep generally, but to far greater depths in the western mountains. (Summary supplied by U.S. Weather Bureau.)

CEREAL AND FORAGE INSECTS

GREENBUG (Schizaphis graminum) - OKLAHOMA - Populations of 200 per linear foot present in localized area of Payne County. Heavy populations also reported in isolated sandy land areas of Logan County; ranged 50-200 per linear foot; 2 fields sprayed in this area. Counts ranged 1-4 per linear foot in northwest; fewer than 1 per foot in east central; and none found in fields checked in southwest. All counts made prior to onset of sub-freezing and icy conditions. (Okla. Coop. Sur.).

SPOTTED ALFALFA APHID (Therioaphis maculata) - ARKANSAS - Numbers much lower in northwest area than few weeks ago prior to rain and cold weather. Alfalfa on University of Arkansas farm, where counts previously reported as high as 400-500 per linear foot, now only 15-20 per linear foot. Temperature for 2 nights below 20° F. (Ark. Ins. Sur.). OKLAHOMA - Light populations of 15-40 per 10 sweeps in alfalfa noted in Kiowa-Jackson County area, southwest. (Okla. Coop. Sur.). ARIZONA - Populations remain very small on alfalfa in Yuma, Maricopa and Pinal Counties. (Ariz. Coop. Sur.).

PEA APHID (Acyrthosiphon pisum) - OKLAHOMA - Populations of 100 per 10 sweeps present in alfalfa in Jackson County; counts ranged 5-20 per 10 sweeps in Mayes and Muskogee Counties. (Okla. Coop. Sur.).

ENGLISH GRAIN APHID (Macrosiphum avenae) - OKLAHOMA - Light counts of 0-10 per linear foot noted in fields checked in northwest, southwest, central and east central areas. (Okla. Coop. Sur.).

APPLE GRAIN APHID (Rhopalosiphum fitchii) - OKLAHOMA - Light populations of fewer than 10 per linear foot noted in some fields checked in northwest, southwest, central and east central areas. (Okla. Coop. Sur.).

TARNISHED PLANT BUG (Lygus lineolaris) - OKLAHOMA - Ranged 5-30 per 10 sweeps in Kiowa and Jackson County alfalfa. (Okla. Coop. Sur.).

LYGUS BUGS (Lygus spp.) - ARIZONA - Adults averaged 25 per 100 sweeps in alfalfa in Maricopa and Pinal Counties. (Ariz. Coop. Sur.).

CHINCH BUG (Blissus leucopterus) - KANSAS - Annual hibernation survey completed. Samples of bunch grass collected during late November in 58 counties in 6 districts of State. The highest average numbers of hibernating bugs per square foot of bunch grass were in Linn County, east central area (1,636), and in Montgomery County, southeast area (1,419). These are both severe ratings. Marshall County, northeast area, had an average of 646 bugs per square foot; Sumner County, south central area, had 614; and Shawnee County, east central, had 525. These are all moderate ratings. In northeast area, Pottawatomie County had 427, Jackson County had 423 and Nemaha County had 393; in central area, McPherson County had 335. These are all light ratings. All other counties surveyed had average counts of less than 250 bugs per square foot of bunch grass, or non-economic ratings. (Bell, Peters).

THREE-CORNERED ALFALFA HOPPER (Spissistilus festinus) - ARIZONA - Adult counts per 100 sweeps in alfalfa averaged 20 in Yuma County and 33 in Maricopa and Pinal Counties. (Ariz. Coop. Sur.).

GROUND PEARLS - ALABAMA - Extremely heavy in 50-acre field in Dale County where Bahia grass plowed up past spring and planted to corn. Populations apparently built up on root system of Bahia grass. (Estes, Buttram).

SPOTTED CUCUMBER BEETLE (Diabrotica undecimpunctata howardi) - OKLAHOMA - Counts of 10 per 10 sweeps noted in alfalfa in Kiowa and Jackson Counties. (Okla. Coop. Sur.).

WINTER GRAIN MITE (Penthaleus major) - TEXAS - Heavy, widespread populations damaging oats in Comal County. (Shaver).

FRUIT INSECTS

PEACH TREE BORER (Sanninoidea exitiosa) - ALABAMA - Quite heavy and active on untreated peach, plum and cherry in State. Few 3-year-old plums dug and examined revealed average of 5 larvae per tree, with hidden girdling covering 50 percent of underground trunk area. Large amounts of "gum", mostly at ground level and beneath, reveal infestations. (McQueen).

SCHOENE SPIDER MITE (Tetranychus schoenei) - GEORGIA - Light on peach trees in Houston County. (Pollard, Sept. 13).

Citrus Insect Situation in Florida - End of November - On leaves, CITRUS RUST MITE (Phyllocoptruta oleivora) infested 78 percent of groves (norm 71 percent); 66 percent economic (norm 47 percent). On fruit, CITRUS RUST MITE infested 66 percent of groves (norm 70 percent); 49 percent economic (norm 47 percent). Population on leaves highest on record for November due to extremely high infestations in groves damaged by cold last December. Those groves also have high infestations on fruit. Population on fruit decreasing to normal level but will remain high on leaves. Highest districts Brooksville, Bartow, west coast, upper east coast and Gainesville. TEXAS CITRUS MITE (Eutetranychus banksi) infested 59 percent of groves (norm 30 percent); 25 percent economic (norm 13 percent). Population continues to be higher than in any prior November, with cold-damaged groves having heavier infestations. Decrease is expected in December. Highest districts Gainesville, upper east coast, west coast and Brooksville. CITRUS RED MITE (Panonychus citri) infested 50 percent of groves (norm 54 percent); 24 percent economic (norm 24 percent). This mite near moderate level typical of November. Few heavy infestations will occur in cold-damaged groves. Highest districts Brooksville and west coast. PURPLE SCALE (Lepidosaphes beckii) infested 82 percent of groves (norm 72 percent); 19 percent economic (norm 6 percent). GLOVER SCALE (L. gloverii) infested 68 percent of groves (norm 28 percent); 18 percent economic (norm 1 percent). CHAFF SCALE (Parlatoria pergandii) infested 73 percent of groves (norm 43 percent); 20 percent economic (norm 1 percent). YELLOW SCALE (Aonidiella citrina) infested 38 percent of groves (norm 11 percent); 6 percent economic (norm 1 percent). The above scale species continue to be above normal abundance; however, only few scattered groves have important infestations. Decrease is expected, except for YELLOW SCALE, which may increase slightly. Pinnaspis strachani is above normal abundance in east coast groves. It is of little importance at this time. WHITEFLIES are decreasing but still are above average level. (W. A. Simanton (Citrus Expt. Sta., Lake Alfred)).

CITRUS RUST MITE (Phyllocoptruta oleivora) - FLORIDA - Light on leaves of several thousand sweet orange surveyed December 3-10 at Dundee, Babson Park and Bowling Green, Polk County; Weirsdale, Marion County; Dade City, Pasco County; and Avon Park, Highlands County. (Fla. Coop. Sur.).

A LEAF ROLLER MOTH (Platynota stultana) - ARIZONA - Young larvae found in rolled leaves of citrus in nursery in Yuma County. (Ariz. Coop. Sur.).

HICKORY SHUCKWORM (Laspeyresia caryana) - ALABAMA - Examination of pecan shucks on ground in numerous Lee County orchards revealed extremely high larval population in shucks; some infestations as high as 1-2 larvae per shuck. Nut yield extremely high this year in State. An estimated one-half to 5 million larvae per acre of orchard going into winter months in old shucks in many orchards. Pupation should occur in March and April of 1964. (McQueen).

FIG SCALE (Lepidosaphes ficus) - CALIFORNIA - Immature forms infesting fig trees locally in Sacramento, Sacramento County. This pest is generally kept under economic levels by parasites in most areas of State. (Cal. Coop. Rpt.).

TRUCK CROP INSECTS

CABBAGE APHID (Brevicoryne brassicae) - ALABAMA - Continues a problem on cabbage and collards throughout central part of State. Control on Experiment Station farm in Lee County has been very difficult and almost impossible. What is probably this species and Hyadaphis pseudobrassicae (turnip aphid) reported serious on salad crops in Cullman County approximately 15 days ago. (Johnston, Pinkston).

TOMATO FRUITWORM (Heliothis zea) - ARIZONA - Larvae continue to damage lettuce crop in Pinal and Maricopa Counties. Controls being continuously applied to keep damage at a minimum. (Ariz. Coop. Sur.).

CABBAGE LOOPER (Trichoplusia ni) - ARIZONA - Populations have decreased in lettuce in Yuma and Maricopa Counties; less controls now being applied. (Ariz. Coop. Sur.).

SWEETPOTATO WEEVIL (Cylas formicarius elegantulus) - ALABAMA - Severe infestation reported on localized farm in Geneva County. This farm affected 4-5 years ago; this first replanting of sweetpotatoes since that time. (Williams, Ledbetter). GEORGIA - Moderate on sweetpotatoes in Decatur County. (Powell, Dec. 5).

A LEAF MINER (Liriomyza munda) - OHIO - Heavy numbers observed on tomato foliage at greenhouse in Wooster, Wayne County, northeast. (Lyon).

TWO-SPOTTED SPIDER MITE (Tetranychus telarius) - FLORIDA - Infesting strawberry at Gainesville, Alachua County. (Habeck).

COTTON INSECTS

PINK BOLLWORM (Pectinophora gossypiella) - ARIZONA - Infestations still being found in cotton-growing areas of Maricopa and Pinal Counties. Infestations have been found in nearly all areas of Maricopa County. (Ariz. Coop. Sur.).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

PINE APHIDS - ALABAMA - Populations, mainly Eulachnus, continue very high in pines but have not caused as much alarm in flight as some 10 days previously in some areas of State. Cars and equipment under affected trees heavy with honeydew. Adults and larvae of Hippodamia convergens continue to feed in abundance, along with syrphid fly larvae; aphid populations fairly well destroyed in some instances. Cinara also common on pines but apparently of little consequence. (McQueen). Also see CEIR 13(48):1365 and 13(50):1395. OHIO - Eggs of undetermined species ranged moderate to heavy on white pine at a State park near Mount Gilead, Morrow County, central area. Many dead females observed at front of each row of eggs on individual needles. (Lyon).

PINE BARK APHID (Pineus strobi) - NORTH CAROLINA - Infesting 15 white pines at a location in Davidson County; one tree killed. (Tucker, Mount).

A BLASTOBASID MOTH (Holcocera iceryaeella) - CALIFORNIA - Larvae and pupae of this species and Rhyacionia sp., probably pasadenana, heavy in Monterey pine in Richmond, Contra Costa County; trees considerably weakened. Populations medium in pine in Turlock, Stanislaus County. Larvae heavy in twig tips of Monterey pines in Eureka, Humboldt County. (Cal. Coop. Rpt.).

APHIDS - MARYLAND - Lachnus salignus heavy on willow at a location in Baltimore. (U. Md., Ent. Dept.). CALIFORNIA - Prociphilus fraxinifolii heavy on ash trees in a local area in Sacramento, Sacramento County. (Cal. Coop. Rpt.).

GREEN PEACH APHID (*Myzus persicae*) - OHIO - A major pest of chrysanthemums and snapdragons throughout most greenhouses in State; infestations heavy in many greenhouses, while others are relatively free of pest. Timely control applications and alternating use of different insecticides have temporarily checked severe outbreaks. Reinfestation unavoidable, as cuttings often purchased from other infested greenhouses. (Lyon).

COCCIDS - CALIFORNIA - *Ferrisia virgata* light to heavy on hollyhock, zinnia, lantana, *Morus* sp., canna, Bermuda grass, verbena and *Ipomoea crassicaulis* in several yards in Brawley, Imperial County. This mealybug under eradication status in State. Several infestations have been eradicated in different parts of State in past years. *Diaspis echinocacti* heavy on *Opuntia* sp. in cactus garden in Lodi, San Joaquin County. *Spilococcus cactearum* medium on *Astrophytum* sp. nursery plants in Holtville, Imperial County. (Cal. Coop. Rpt.). FLORIDA - *Ceroplastes ceriferus* infested *Podocarpus maki* at Samsula, Volusia County. (Pott, Dec. 3). *Fiorinia theae* present on leaves of *Camellia* sp. at Jacksonville, Duval County. (King, Dec. 5). *Ceroplastes floridensis* moderate on stems and leaves of *Ixora chinensis* at Winter Haven, Polk County. (Norton, Peterson; Dec. 4). NORTH CAROLINA - *Aspidiotus perniciosus* heavy on twigs of flowering crab apple at a location in Caldwell County. (Mount). VIRGINIA - *Pseudaulacaspis pentagona* heavy on evergreens and cherry trees at a location in Cana, Carroll County. (Amos, Tabor; Dec. 5).

A WHITEFLY (*Tetraleurodes* sp., probably *acaciae*) - CALIFORNIA - Nymphs heavy on leaves of albizzia in Corning, Tehama County. (Cal. Coop. Rpt.).

TOBACCO BUDWORM (*Heliothis virescens*) - ARIZONA - Larvae feeding on dichondra lawns in Coolidge area, Pinal County; some damage reported. (Ariz. Coop. Sur.). CALIFORNIA - Medium on geranium plants in Modesto, Stanislaus County. (Cal. Coop. Rpt.).

A TWIG GIRDLER (*Periploca ceanothiella*) - CALIFORNIA - Larvae heavy in twigs of ceanothus in Oakland, Alameda County. (Cal. Coop. Rpt.).

A LEAF ROLLER MOTH (*Platynota stultana*) - CALIFORNIA - Larvae light on *Euonymus japonicus aureo-variegatus* in San Francisco, San Francisco County; causing serious damage to *Juniperus conferta* in Fresno, Fresno County. (Cal. Coop. Rpt.).

A SEAGRAPE BORER (*Hexeris enhydris*) - FLORIDA - Infestations scattered and moderate on seagrape (*Coccoloba uvifera*) at Merritt Island, Brevard County. (Levan, Nov. 22).

A GALL MIDGE (*Parallelodiplosis florida*) - ALABAMA - Common on ornamental live oak in Lowndes County, with at least 50 percent of leaves affected. (Mathews).

WALNUT BLISTER MITE (*Aceria erinea*) - CALIFORNIA - Medium on seedling English walnut nursery stock in San Luis Obispo, San Luis Obispo County. (Cal. Coop. Rpt.).

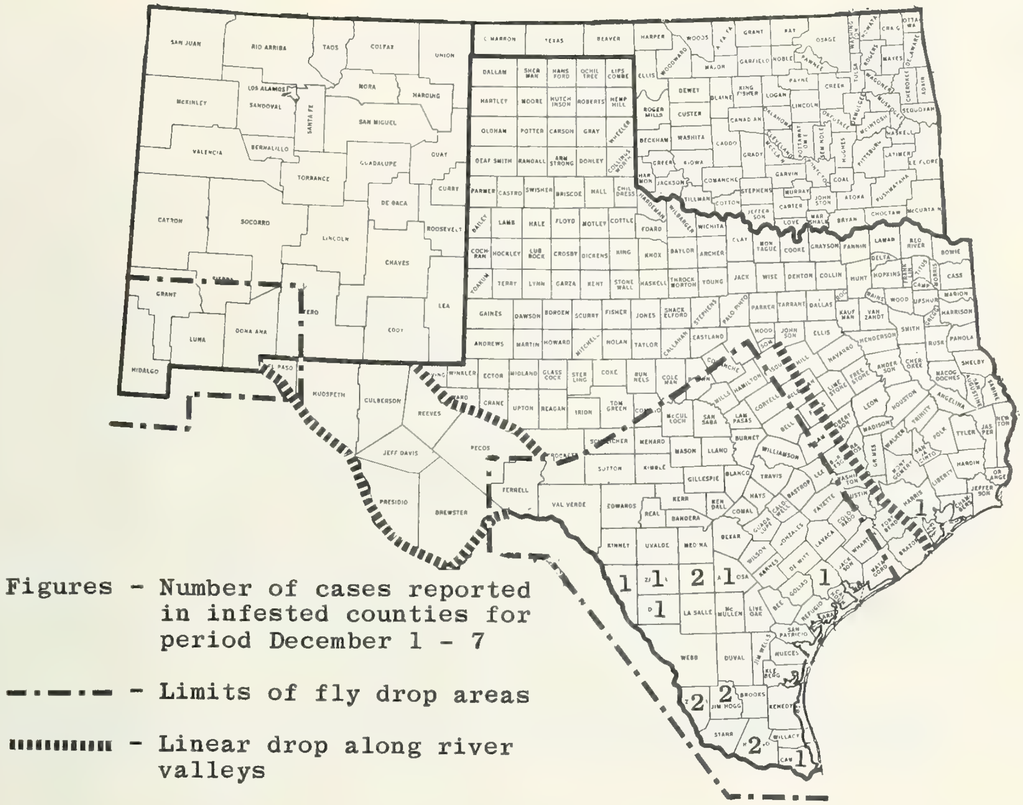
SPIDER MITES - GEORGIA - Unspecified species heavy on pyracantha in De Kalb County. (Shirley, Vanderford; Dec. 4). CALIFORNIA - *Oligonychus coniferarum* medium on *Juniperus* sp. nursery stock in Valley Home, Stanislaus County. (Cal. Coop. Rpt.).

INSECTS AFFECTING MAN AND ANIMALS

MOSQUITOES - TEXAS - *Culex salinarius* most common species in Jefferson County during November. *Aedes sollicitans* also present at intervals; some *Psorophora confinnis* observed. (Jeff. Co. Mosq. Rpt.).

STATUS OF THE SCREW-WORM (*Cochliomyia hominivorax*) IN THE SOUTHWEST

During the period December 1 - 7, only 14 cases of screw-worm identified in the 5 southwestern States in the eradication area. All 14 cases found in southern TEXAS. This is lowest number of cases reported since early spring. Cooler temperatures are occurring in the area; however, in most of the region, temperatures have not reached lows sufficient to kill screw-worms. Screw-worm activity has been hindered and pupation period prolonged. No cases of screw-worm were reported from New Mexico. A total of 146,328,650 sterile flies was released during the period. (Anim. Dis. Erad. Div.).


Figures - Number of cases reported in infested counties for period December 1 - 7
▬ · ▬ · ▬ - Limits of fly drop areas
▮▮▮▮▮▮▮▮ - Linear drop along river valleys

COMMON CATTLE GRUB (*Hypoderma lineatum*) - GEORGIA - Very light on cattle in Spalding County. (Roberts, Dec. 2).

LONG-NOSED CATTLE LOUSE (*Linognathus vituli*) - GEORGIA - This species and *Solenopotes capillatus* ranged moderate to heavy on beef cattle in Spalding County. (Roberts, Dec. 2).

HOG LOUSE (*Haematopinus suis*) - OKLAHOMA - Light to moderate infestations reported from Garvin, Cotton and Bryan Counties. (Okla. Coop. Sur.).

BEDBUG (*Cimex lectularius*) - ARIZONA - Large infestation found in building in Phoenix, Maricopa County. (Ariz. Coop. Sur.).

CAT FLEA (Ctenocephalides felis) - OKLAHOMA - Continues to cause some concern to homeowners in Stillwater area, Payne County. (Okla. Coop. Sur.).

TROPICAL RAT MITE (Ornithonyssus bacoti) - CALIFORNIA - Specimens taken from resident in home in La Mesa, San Diego County. (Cal. Coop. Rpt.).

BROWN DOG TICK (Rhipicephalus sanguineus) - MARYLAND - Engorged adults found in home at College Park, Prince Georges County. (U. Md., Ent. Dept.).

A BROWN SPIDER (Loxosceles reclusa) - OKLAHOMA - Occurred in several homes in Stillwater area, Payne County. (Okla. Coop. Sur.).

HOUSEHOLD AND STRUCTURAL INSECTS

INDIAN-MEAL MOTH (Plodia interpunctella) - OKLAHOMA - Present in variety of stored products in several homes in Stillwater area, Payne County. (Okla. Coop. Sur.).

SAW-TOOTHED GRAIN BEETLE (Oryzaephilus surinamensis) - TEXAS - Being reported from homes in Harris County. (Fix).

CIGARETTE BEETLE (Lasioderma serricorne) - MARYLAND - Occurring in homes in Baltimore and Talbot Counties. (U. Md., Ent. Dept.).

ELM LEAF BEETLE (Galerucella xanthomelaena) - VIRGINIA - Adults numerous in home in Culpeper County. (Tarpley, Heltzel; Dec. 7).

FACE FLY (Musca autumnalis) - NEBRASKA - Overwintering population present for second year in guest room on ninth floor of Nebraska Center for Continuing Education on College of Agriculture campus in Lincoln, Lancaster County. (Bergman).

BOXELDER BUG (Leptocoris trivittatus) - MARYLAND - A nuisance at a location in Ellicott City, Howard County. (U. Md., Ent. Dept.). UTAH - Entering homes at North Logan, Weber County. (Knowlton).

A GRASS BUG (Arhyssus scutatus) - CALIFORNIA - Medium population entering residence in Kelseyville, Lake County. Grass bugs continue a yard and household nuisance in many locations. (Cal. Coop. Rpt.).

CLOVER MITE (Bryobia praetiosa) - MARYLAND - Entering homes and causing nuisance in Montgomery, Baltimore, Prince Georges and Talbot Counties. (U. Md., Ent. Dept.). NORTH CAROLINA - A nuisance at a Rutherford County location. (Wilson, Robertson).

GERMAN COCKROACH (Blattella germanica) - NEBRASKA - Heavy infestation present in home in Lincoln, Lancaster County. (Bergman).

SUBTERRANEAN TERMITES - UTAH - Seriously infested another home in Salt Lake City, Salt Lake County; woodwork breaking through. (Knowlton).

STORED-PRODUCT INSECTS

POTATO TUBERWORM (Gnorimoschema operculella) - MICHIGAN - In Monroe County, adults collected at rate of 98 per night with 2 blacklight traps; temperature held at 60° F. In another storage in same county, adults collected at rate of 74 per night with one blacklight trap; temperature held at 55° F. in this storage. (Wells, Laser).

LARDER BEETLE (*Dermestes lardarius*) - MARYLAND - Adults infesting country hams at Damascus, Montgomery County. (U. Md., Ent. Dept.).

BENEFICIAL INSECTS

PREDATORS - OKLAHOMA - Several species of lady beetles, *Chrysopa* spp. and *Nabis* spp. continue active in Kiowa-Jackson County area. Field observations made prior to onset of icy conditions in State. (Okla. Coop. Sur.).

MISCELLANEOUS INSECTS

LESSER MEALWORM (*Alphitobius diaperinus*) - NORTH CAROLINA - A nuisance in litter in several poultry houses in Cleveland County. Det. by D. A. Mount. (Martin).

PUMPKIN CATERPILLAR (*Diaphania indica*) - FLORIDA - Adult taken in Steiner trap in grapefruit tree at Sebring, Highlands County, December 6. (Morris).

CITRUS WHITEFLY (*Dialeurodes citri*) - CALIFORNIA - Survey added 3 new city blocks to area to be sprayed. Eradication treatment began November 18, with approximately 1,500 city blocks to receive second application this year. Adult whiteflies present in known infested area past mid-November. (Cal. Coop. Rpt.).

JAPANESE BEETLE (*Popillia japonica*) - OHIO - Total of 401 beetles trapped in Preble County (southwest) during period July 5 to August 7, 1963. Beetles found distributed over much wider area than in 1962. Heaviest numbers trapped in cemetaries and along grassy roadsides around New Paris, north of U.S. Route 40. (Wolfe).

IMPORTED FIRE ANT (*Solenopsis saevissima richteri*) - FLORIDA - Found in new township in Polk County near Mulberry, 20-30-24. Det. by W. Breidenbach. (Richards, Dec. 3).

RING-LEGGED EARWIG (*Euborellia annulipes*) - FLORIDA - Infested earthworm beds at Osteen, Volusia County, November 29. (Mrs. R. Lawson).

SPRINGTAILS - ALABAMA - Reported in supply of spring water in Blount County and as plentiful in rain puddles in gardens and lawns throughout central area. (McCall et al.).

A TADPOLE SHRIMP (*Triops longicaudatus*) - CALIFORNIA - Light in water in El Centro, Imperial County. This species a considerable problem in rice fields in northern part of State. (Cal. Coop. Rpt.).

CORRECTIONS

CEIR 13(48):DETECTION and page 1369 - WHITE-FRINGED BEETLES - Marion County, Tennessee, should read *Madison* County, Tennessee.

CEIR 13(49):1376 - A SKIPPER (Erynis tristis) should read (Eryn*n*is tristis).

LIGHT TRAP COLLECTIONS

	Temperature °F	Precipitation	Type of trap *	*Agrotis ipsilon* (black cutworm)	*Carpocapsa pomonella* (codling moth)	*Chorizagrotis auxiliaris* (army cutworm)	*Estigmene acrea* (salt-marsh caterpillar)	*Faronta diffusa* (wheat head armyworm)	*Feltia subterranea* (granulate cutworm)	*Heliothis virescens* (tobacco budworm)	*Heliothis zea* (bollworm, corn earworm)	*Laphygma frugiperda* (fall armyworm)	*Loxostege commixtalis* (alfalfa webworm)	*Loxostege similalis* (garden webworm)	*Loxostege sticticalis* (beet webworm)	*Ostrinia nubilalis* (European corn borer)	*Peridroma saucia* (variegated cutworm)	*Prodenia ornithogalli* (yellow-striped armyworm)	*Protoparce quinquemaculata* (tomato hornworm)	*Protoparce sexta* (tobacco hornworm)	*Pseudaletia unipuncta* (armyworm)	*Spodoptera exigua* (beet armyworm)	*Trichoplusia ni* (cabbage looper)	Major crop **
CALIFORNIA																								
Davis 11/30-12/6									1												5			Misc.
FLORIDA																								
Gainesville 11/26			BL	7					6		1	1						1			6			
Gainesville 12/5			BL	2																				
Gainesville 12/10			BL						1															
GEORGIA																								
Tifton 12/5-11			BL							0	1								0	0				
MISSISSIPPI																								
Stoneville 11/29-12/5	28-59	1.26	MV	3													1				1			
Stoneville 11/29-12/5	28-59	1.26	BL	1					2															
SOUTH CAROLINA																								
Charleston 12/2-8	29-66	0.11	BL	5			0		0	0	0	0					0	2	0	0	8		0	

* BL = blacklight; I = incandescent; MV = mercury vapor ; O = other

** alf. = alfalfa; beet = garden beet and/or sugar beet; cole = cole crops (crucifers); cott. = cotton; FC = field corn; grain = small grains; leg. = legumes (unspecified); lett. = lettuce; pean. = peanut; pepp. = pepper; pot. = potatoes; SC = sweet corn; sol. = solanaceous plants (unspecified); soy. = soybean; TC = truck crops (unspecified or mixed); tob. = tobacco; tom. = tomato.

Boll Weevil Hibernation Surveys in North and South Carolina, Tennessee, Mississippi, Louisiana and Texas - Fall 1963

The fall collection of surface ground (woods) trash samples (two square yards per sample) has been completed in 6 Southern States by State and Federal agencies to determine the number of boll weevil (Anthonomus grandis) adults that went into hibernation. The same areas were sampled as in the fall of 1962, and wherever possible, the samples were taken from locations that could be sampled again next spring. A total of 3 samples was collected at each location in the Carolinas, Mississippi, Louisiana and Texas; 20 samples were taken in McNairy County, Tennessee. In North and South Carolina, 30 locations were sampled, with the number of counties per area from which samples were taken varying from 3 to 6. In Mississippi, 90 samples were taken with either 7 or 8 locations being sampled in each of the 4 areas. A total of 40 locations was sampled in northeastern Louisiana; 10 each in East Carroll and Tensas Parishes and 20 in Madison Parish. In Texas, 75 samples were taken, with either 6 or 7 locations being sampled in each of 4 counties.

Average counts (live weevils per acre) exceeded those of 1962 only in area 1 of the Carolinas (south central South Carolina) and in the tri-parish area of northeastern Louisiana. In all other areas sampled, average counts were lower than in the fall of 1962.

In Florence County, South Carolina, the number of weevils per acre (11,406) is 1.8 times the average for the 21 years that such examinations have been made. This is the fourth consecutive year in which over 10,000 weevils per acre have been found in the fall examinations in this county.

McNairy County, Tennessee, was chosen again this year for the survey in that State because it usually represents the heaviest infestations found in the southern tier of counties. The other southern counties usually support only slightly lower infestations than that of McNairy County. The number of weevils per acre was 1,089 compared with 3,633 in 1962, 3,025 in 1961, 2,622 in 1960, 1,882 in 1959, 1,214 in 1958, 2,365 in 1957, 933 in 1956, 902 in 1955, 311 in 1954, 31 in 1953, 2,259 in 1952 and 239 in 1951.

The 1963 State average of 3,010 in Mississippi was less than half the average for the past 5 years, 7,526 weevils per acre.

The average number of boll weevils per acre in the tri-parish area of northeast Louisiana was 7,317. The average by parish was 6,295 in Madison, 10,249 in East Carroll and 5,407 in Tensas. During the past 9 falls that these records have been made in the tri-parish area, the number of weevils per acre has ranged from 2,622 to 13,433 and averaged 6,044 in Madison Parish; 5,165 to 13,235 and averaged 8,746 in East Carroll Parish; and 0 to 17,593 and averaged 7,043 in Tensas Parish. During the past 28 years that similar records have been made in Madison Parish, there have been only 3 years in which a larger number of weevils has been found in ground trash in the fall than the 6,295 found in 1963. Field conditions were equally favorable, or perhaps even better, this fall for collecting ground trash samples in northeast Louisiana than any fall during the 28 years that these studies have been in progress.

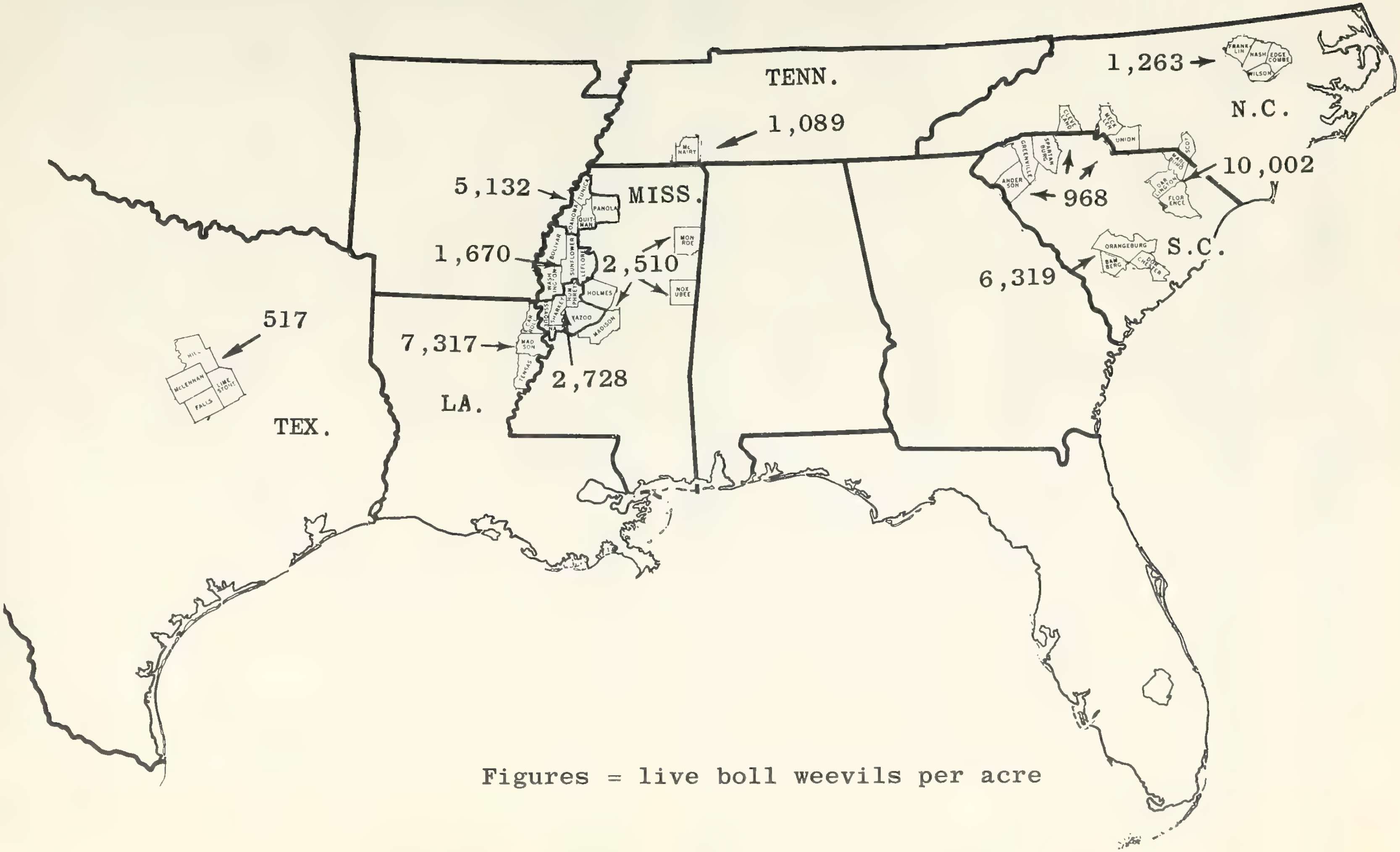
The area average of 517 boll weevils per acre in the fall of 1963 in central Texas compares with averages of 1,781 in 1962, 4,114 in 1961, 4,501 in 1960 and 6,631 in 1959. The decrease in numbers entering hibernation in 1963 was due primarily to the low numbers present in the spring to infest the 1963 crop; the very hot, dry growing season; and early maturity, harvest and stalk destruction. (A. R. Hopkins, H. M. Taft, J. H. Locke, T. R. Pfrimmer, G. L. Smith, C. B. Cowan).

See Table and Map on following two pages.

BOLL WEEVIL HIBERNATION SURVEYS - FALL 1963

Area (County and State)	Number of Weevils Per Acre 1962	Number of Weevils Per Acre 1963
NORTH AND SOUTH CAROLINA		
South Central South Carolina (Orangeburg, Bamberg, Dorchester Counties (area 1)).	4,249	6,319
Coastal Plain of South and North Carolina (Florence, Darlington and Marlboro Counties, S.C.; Scotland County, N.C. (area 2)).	12,207	10,002
Piedmont of South and North Carolina (Anderson, Greenville and Spartanburg Counties, S.C.; Mecklenburg, Cleveland and Union Counties, N.C. (area 3)).	8,631	968
North Central North Carolina (Nash, Wilson, Franklin and Edgecombe Counties (area 4)).	5,136	1,263
TENNESSEE		
McNairy County	3,633	1,089
MISSISSIPPI		
Lower Delta (Sharkey, Issaquena, Yazoo and Humphreys Counties (area 1)).	2,863	2,728
Central Delta (Washington, Bolivar, Sunflower and Leflore Counties (area 2)).	5,377	1,670
North Delta (Coahoma, Tunica, Quitman and Panola Counties (area 3)).	13,761	5,132
Hill Section (Holmes, Madison, Noxubee and Monroe Counties (area 4)).	2,850	2,510
LOUISIANA		
Northeastern (East Carroll, Madison and Tensas Parishes)	4,035	7,317
TEXAS		
Central (Falls, Hill, Limestone and McLennan Counties)	1,781	517

BOLL WEEVIL HIBERNATION SURVEYS - FALL 1963



Figures = live boll weevils per acre

HAWAIIAN INSECT NOTES

The following notes on Hawaii insect conditions were presented at the 696th meeting of the Hawaiian Entomological Society held December 9, 1963.

A SUBTERRANEAN TERMITE (Coptotermes formosanus Shiraki) - A queen was found December 2 by Donald Yara. The carton nest of about 2 cubic feet of material was in the false bottom of a closet directly on the concrete slab near the bathroom. No tunneling was found leading to the ground. In dissecting away parts of the nest in order to remove the queen, hundreds of soldiers and small nymphs were observed but no eggs. There were many thousands of workers present. The queen and a large part of the colony are being held in a crisper dish in the insectary. (H. B. Bess, Univ. of Hawaii).

A PARASITIC TACHINA FLY (Trichopoda pennipes F.) - Eggs of this parasite found on a scutellerid bug (Coleotichus blackburniae White) which was collected on November 3, 1963, at the Tantalus park, Oahu. T. pennipes was introduced for the control of the southern green stink bug (Nezara viridula (L.)). (B. D. Perkins, Univ. of Hawaii).

A REDUVIID BUG (Polididus armatissimus Stål) - Collected on 6 to 8 occasions from different areas of Oahu. Specimens present in collections of insects made by general entomology students at the University of Hawaii. Species now apparently widespread throughout the island. (J. W. Beardsley, Univ. of Hawaii).

A DIASPID SCALE INSECT (Clavaspis herculeana (Doane & Hadden)) - Found on plumeria cutting during predeparture baggage inspection on May 18 by R. Wakamiya. Det. by R. F. Wilkey. This is a new State record. (E. S. Shiroma, PQ, ARS, USDA).

SOUTHERN GREEN STINK BUG (Nezara viridula (L.)) - Found attacking growing tips of Guiana-chestnut pachira (Pachira aquatica); a new host record for species. (W. C. Mitchell).

Survey to Determine the Oviposition and Hatching Records of the Alfalfa Weevil in Massachusetts During the Fall of 1963[1]

F. R. Shaw (2)

During the 1963 season, an alfalfa field in New Marlboro, Massachusetts, was found to be heavily infested by the alfalfa weevil (Hypera postica (Gyll.)). This field had received no insecticide treatment and was not cut after the middle of August. Hence it presented a good opportunity to obtain information on the fall activities of the weevil.

Adult weevil populations were low during the period from August 15 to September 5 after which they began to increase. In early October, an examination of fifty stems for oviposition was begun which was continued until November 10. The stems were randomly collected, brought to the laboratory and carefully examined for oviposition punctures. When a puncture was found, it was opened and the cavity below examined for eggs. The data obtained are summarized in Table I.

It is of interest that newly hatched alfalfa weevil larvae were observed as late as October 31. On November 10, one lot of eggs was observed containing mature embryos but no newly hatched larvae were found; also newly laid eggs and recently emerged adults were found on this same date.

It is recognized that the month of October was unusually warm for Massachusetts. No doubt this influenced the oviposition and other activities of the alfalfa weevil.

Table I. Number of alfalfa weevil oviposition punctures and egg count records per 50 alfalfa stems. New Marlboro, Massachusetts, 1963

Date of collection	No. of stems with punctures	Total no. of punctures	No. punctures from which eggs had hatched	No. punctures empty (no eggs found)	Max. no. eggs per puncture	Min. no. eggs per puncture (3)	Avg. no. eggs per puncture (3)
Oct. 2	32	45	17	3	15	2	10.2
Oct. 17	26	38	17	5	8	3	5.6
Oct. 24	28	37	15	8	12	1	5.8
Oct. 31	36	63	36	12	14	2	6.2
Nov. 10	39	69	36	12	23	2	7.2

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1. Contribution 1362 from the Department of Entomology and Plant Pathology and from the Massachusetts Agricultural Experiment Station.

2. Professor of Entomology and Beekeeping, University of Massachusetts.

3. Based on punctures containing eggs.

INTERCEPTIONS OF SPECIAL INTEREST AT U.S. PORTS OF ENTRY

Some important interceptions that were reported by the Plant Quarantine Division, ARS, USDA, on September 30, 1963, follow. These reports are based on identifications received from Federal taxonomists at the U.S. National Museum during the month, and include any of special interest from recent months that were not previously reported.

CITRUS BLACKFLY (*Aleurocanthus woglumi* Ashby) one time each in baggage at Miami, Florida, and at Laredo, Texas.

A WHITEFLY (*Aleyrodes brassicae* Wlk.) (cabbage pest of Europe) in ship's stores at New York, New York.

MEXICAN FRUIT FLY (*Anastrepha ludens* (Lw.)) in baggage in orange fruit at San Pedro, California.

A SPRUCE CONE MOTH (*Laspeyresia strobilella* (L.)) (of importance in Europe) in ship's cargo of spruce cones at Baltimore, Maryland. This is first interception reported in cargo and first interception since 1960.

CABBAGE MOTH (*Mamestra brassicae* (L.)) 4 times in stores; one time each at San Juan, Puerto Rico, and Chicago, Illinois; and 2 times at New York, New York.

A STENOMID MOTH (*Stenoma catenifer* (Wlsm.)) 7 times; 5 times in baggage - 2 times at New Orleans, Louisiana; 2 times at Eagle Pass, Texas; and one time at Miami, Florida; 1 time in cargo (prohibited) at New York, New York; 1 time in ship's quarters at New Orleans, Louisiana.

COFFEE BERRY BORER (*Stephanoderes hampei* Ferr.) (serious pest of coffee in Brazil, Africa, Indonesia, etc.) in green coffee found in ship's quarters at Puerto Rico.

A THRIPS (*Taeniothrips eucharii* (Whetzel)) (a pest of *Lycoris* bulbs in Japan) twice in cargo of *Lycoris* bulb sprouts at Seattle, Washington.

WHITE GARDEN SNAIL (*Theba pisana* (Müller)) 3 times in air cargo at Dover, Delaware; 4 times in ship's cargo; 3 times at New Orleans, Louisiana, and once at Mobile, Alabama.

KHAPRA BEETLE (*Trogoderma granarium* Everts) (or probably that species) 27 times (3 times in ships' holds, 3 times in stores, and 21 times in cargoes of green peas, guar gum, pistachio nuts, gum karaya, burlap bagging, cumin seed, gum arabic, gum hashab, gum tragacanth and polished rice); 4 times at San Juan, Puerto Rico; 14 times at New York, New York; 1 time at New Orleans, Louisiana; 1 time at Philadelphia, Pennsylvania; 1 time at Savannah, Georgia; 5 times at Charleston, South Carolina; 1 time at Houston, Texas.

GOLDEN NEMATODE (*Heterodera rostochiensis* Woll.) 6 times in planes' baggage; 5 times at New York International Airport, New York, and 1 time at San Francisco, California.

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